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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND
INTERFERENCES

In re PATENT APPLICATION OF:

HAUMONT

Group Art Unit: 2617

Application No.: 09/806,939

Examiner: PEACHES, Randy

Filed: May 8, 2001

Title: IDENTIFYING A MOBILE STATION IN A PACKET RADIO NETWORK

SUPPLEMENTAL APPEAL BRIEF TRANSMITTAL

Mail Stop Appeal Brief-Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed herewith is a Supplemental Brief in response to the Office Communication dated June 28, 2007.

There is no fee due. However, in the event that any fee is due, the undersigned authorizes the charging to Deposit Account No. 03-3975 (under Order No. 60258-279245) the required fee

Respectfully submitted

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I. INTRODUCTION

This brief is in furtherance of the Notice of Appeal, filed in this case on April 12, 2006 and the Notice of Panel Decision from Pre-Appeal Brief Review mailed June 23, 2006.

The fees required under Section 1.17(c), and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL.

A. 37 C.F.R. § 41.37(c)(i) – REAL PARTY IN INTEREST

The real party in interest for this Appeal and the present application is Nokia Corporation by way of an Assignment recorded in the U.S. Patent Trademark Office at Reel/Frame 011816/0842.

B. 37 C.F.R. § 41.37(c)(ii) – RELATED APPEALS AND INTERFERENCES

There are presently no appeals or interferences known to the Appellants, the Appellants' representatives or the Assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

C. 37 C.F.R. § 41.37(c)(iii) – STATUS OF CLAIMS

Claims 3, 7, 20-22 and 25-31 are pending and stand rejected; all pending claims are on appeal. The claims on appeal are set forth in the attached Appendix Claims 7, 20, 25-26, 28 and 31 are pending. Claim 3 depends from claim 7; claims 21 and 22 depend from claim 20; claim 27 depends from claim 28; and claims 29 and 30 depend from claim 31. Claims 1-2, 4-6, 8-19, and 23-24 are cancelled.

Appellant is appealing the rejection of claims 20, 22, 25-26 and 28 under 35 U.S.C. 102(e) as being anticipated by Tiedemann et al. (U. S. 6,381,454; hereafter "Tiedemann"), the rejection of claims 3 and 7 under 35 U.S.C. 103(a) as being obvious from Tiedemann, Sawyer et al. (U.S. 5,920,814; hereafter "Sawyer"), Onoe et al. (U.S. 5,361,396; hereafter "Onoe") and Monrad et al. (U.S. 6,208,628; hereafter "Monrad"), the rejection of claim 21 under 35 U.S.C. 103(a) as being obvious from Tiedemann and Huttunen et al. (U.S. 6,356,761; hereafter "Huttunen"), the rejection of claim 27 under 35 U.S.C. 103(a) as being obvious from Tiedemann and Mademann (U.S. 6,081,723), and the rejection of claims 29-31 under 35 U.S.C. 103(a) as being obvious from Wallentin et al. (U.S. Pub. 2002/0086685; hereafter "Wallentin") and Tiedemann.

D. 37 C.F.R. § 41.37(c)(iv) – STATUS OF AMENDMENTS

The claims were amended by Amendments dated April 6, 2001, May 8, 2001 November 8, 2004 and September 19, 2005; amendments to the claims in all Amendments were entered.

II. 37 C.F.R. § 41.37(c)(v) – SUMMARY OF CLAIMED SUBJECT MATTER

A. FEATURES OF INVENTION

Claims 7, 20, 25-26, 28 and 31 are described below, referring to the specification, drawings, and reference numerals. This description is intended to facilitate an understanding of the claims by the Board members and is not intended as a comprehensive claim construction, such as used in the context of an argument of invalidity or infringement. Any reference to more than one reference number or character for any particular claimed element or limitation is illustrative only and is not to be construed as an admission that the claims are limited to any, or all, of the particularly disclosed embodiments.

The claimed invention enables minimization of the problems and disadvantages resulting from conventional temporary identity (TLLI/TMSI) allocation methods. In accordance with the claimed invention, the network element allocates the temporary identity and encodes its own identifier, or part of it, into the temporary identity. For example, if the length of the TLLI is 32 bits, a few bits (such as 3, 4 or 5) can be used to identify the network element allocating the TLLI, whereby 8, 16 or 32 network elements, respectively, could support a single routing/paging/location area. Thus, the TLLI may be used by a base station controller or radio network controller to determine the network element to which it should send the packets addressed to a certain mobile station. Additionally, the TLLI may also be used by any network element receiving an unknown mobile station to determine the identity of the network element currently supporting the mobile station in question. In addition to solving the above-identified problems, the claimed invention also provides a simple and effective way for a Base Station Subsystem (BSS) serving the mobile station to keep track of which network element currently supports the mobile station in question. This is especially useful if a BSS is connected to many network elements.

B. INDEPENDENT CLAIM 7

Independent claim 7 (and its dependent claim) recites a method of allocating a temporary identity (e.g. TLLI) to at least one mobile station (MS) in a cellular network (see specification at least at p. 9, l. 30-35, p. 11, l. 7-10; and Figures 2 and 3). The method comprises: using a network element (for example, SGSN) having an identifier of its own to allocate a temporary identity (for example, TLLI) to the at least one mobile station (MS) wherein the temporary identity (TLLI) includes at least part of an identifier NEI indicating the network element (see specification at least at p. 9, l. 30-35 and p. 11, l. 7-10), wherein each of the at least one mobile stations is located within one of a plurality of paging areas of the cellular network, and wherein the temporary identity of the at least one mobile station also includes a paging identity which is unique to each of the at least one mobile stations (see specification at least at p. 13, l. 18-28), and wherein each of the plurality of paging areas includes an associated master network element for allocating a paging identity to each of the at least one mobile stations in the paging area (see specification at least at p. 13, l. 31-36 and p. 14, l. 1-5).

The method of claim 7 further comprises: requesting a paging identity for at least one mobile station from the master network element of a paging area (see specification at least at p. 13, l. 33-34); and allocating the temporary identity to the at least one mobile station in the paging area associated with the master network element, wherein each of the plurality of paging areas is coupled to a plurality of network elements (see specification at least at p. 13, l. 31-36 and p. 14, l. 1-5); the method further comprising: using the temporary identity for routing uplink traffic to the network element currently serving the at least one mobile station (see specification at least at p. 14, l. 15-17); after the at least one mobile station moves from a first paging area of the plurality of paging areas to a second paging area of the plurality of paging areas, the network element of the second paging area using the temporary identity and the identifier of the second paging area for deriving an identifier of the network element of the first paging area which served the mobile station before the move (see specification at least at p. 11, l. 15-21, p. 12, l. 1-25, and p. 13, l. 9-17; and figures 3 and 4), and wherein only the paging identity is used for paging the mobile station (see specification at least at p. 13, l. 18-28), and the method further comprises using the temporary identity for signaling (see specification at least at p. 12, l. 20-25).

C. INDEPENDENT CLAIM 20

Independent claim 20 recites a cellular network that includes at least one network element SGSN configured to allocate a temporary identity TLLI to at least one mobile station MS and a database element, e.g., a Domain Name Server (DNS). The temporary identity TLLI includes at least a part of an identifier NEI indicating the network element SGSN that allocates the temporary identity TLLI (see specification at least at p. 11, l. 7-14). The database element DNS is configured to receive an inquiry including the at least part of the identifier NEI of the network element SGSN that allocates the temporary identity TLLI and a paging area identifier and determine based on the inquiry, an address of the network element SGSN which allocated the temporary identity TLLI (see specification at least at p 12, l. 18-36, p. 13, l. 1-17; and Figure 4)

D. INDEPENDENT CLAIM 25

Independent claim 25 recites a mobile station MS for a cellular network, wherein the mobile station MS is configured to use a temporary identity TLLI allocated by a network element SGSN (see specification at least at p. 11, l. 7-14). The temporary identity TLLI includes at least a part of an identifier NEI of a network element SGSN that allocates the temporary identity TLLI (see specification at least at p. 11, l. 7-14). The mobile station MS is configured to use a part of the identifier NEI of the network element SGSN that allocates the temporary identity TLLI for data transfer and to use the temporary identity TLLI for signaling (see specification at least at p. 11, l. 7-14, p. 12, l. 20-25, and p. 14, l. 2-5).

E. INDEPENDENT CLAIM 26

Independent claim 26 recites a mobile station MS for a cellular network, wherein the mobile station MS is configured to use a temporary identity TLLI allocated by a network element SGSN (see specification at least at p. 11, l. 7-14). The temporary identity TLLI includes at least a part of an identifier of a network element SGSN that allocates the temporary identity TLLI (see specification at least at p. 11, l. 7-14). The temporary identity TLLI includes 3 to 5 bits of the identifier NEI of the network element SGSN that allocates the temporary identity TLLI (see specification at least at p. 9, l. 30-35 and p. 14, l. 4-5).

F. INDEPENDENT CLAIM 28

Independent claim 28 recites a network element SGSN for a cellular network configured to allocate a temporary identity TLLI to at least one mobile station MS (see specification at least at p. 11, l. 7-14). The temporary identity TLLI includes at least a part of an identifier NEI indicating the network element SGSN (see specification at least at p. 11, l. 7-14). The temporary identity includes 3 to 5 bits of the identifier NEI of the network element SGSN (see specification at least at p. 9, l. 30-35 and p. 14, l. 4-5).

G. INDEPENDENT CLAIM 31

Independent claim 31 recites a radio station controller (a Base Station Controller (BSC) or a Radio Network Controller (RNC), see Figure 1) for a cellular network configured to route data packets including a temporary identity TLLI allocated to a mobile station MS (see specification at least at p. 11, l. 7-14). The temporary identity TLLI includes at least part of an identifier NEI indicating a network element SGSN which allocated the temporary identity TLLI (see specification at least at p. 11, l. 7-14). The radio station controller BSC or RNC is configured to use at least part of the temporary identifier TLLI to route data packets to the network element SGSN when the network element SGSN is serving the mobile station MS (see specification at least at p. 14, l. 15-32). The temporary identity TLLI includes 3 to 5 bits of the identifier NEI of the network element SGSN (see specification at least at p. 9, l. 30-35 and p. 14, l. 4-5).

III. 37 C.F.R. § 41.37(c)(vi) – GROUNDS OF REJECTION
TO BE REVIEWED ON APPEAL

The January 12, 2006 Office Action rejected claims 20, 22, 25-26 and 28 under 35 U.S.C. 102(e) as being anticipated by Tiedemann, rejected claims 3 and 7 under 35 U.S.C. 103(a) as being obvious from Tiedemann, Sawyer, Onoe and Monrad, rejected claim 21 under 35 U.S.C. 103(a) as being obvious from Tiedemann and Huttunen, rejected claim 27 under 35 U.S.C. 103(a) as being obvious from Tiedemann and Mademann, and rejected claims 29-31 under 35 U.S.C. 103(a) as being obvious from Wallentin and Tiedemann.

IV. 37 C.F.R. § 41.37(c)(vii) – ARGUMENT

A. LEGAL REQUIREMENTS FOR ANTICIPATION AND OBVIOUSNESS

In rejecting claims as anticipated under 35 U.S.C. § 102(e) a reference must teach each and every element of the claim. According to MPEP § 2131:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Several basis factual inquiries must be made to determine obviousness or non-obviousness of patent application claims under 35 U.S.C. § 103. These factual inquiries are set forth in Graham v. John Deere Co., 383 US 1, 17, 148 USPQ 459, 467 (1966);

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined.

As stated by the Federal Court in In re Ochiai, 37 USPQ 2d 1127, 1131 (Fed. Cir. 1995);

[T]he test of obviousness vel non is statutory. It requires that one compare the claim's subject matter as a whole with the prior art to which the subject matter pertains. 35 U.S.C. § 103. The inquiry is thus highly fact-specific by design. . . . When the references cited by the Examiner fail to establish a prima facie case of obviousness, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) (Emphasis added.)

In rejecting claims under 35 U.S.C. § 103(a), an Examiner bears an initial burden of presenting a prima facie case of obviousness. A prima facie case of obviousness is established only if there is a suggestion or motivation to combine reference teachings; a reasonable expectation of success; and the prior art references, when combined, teach or suggest all the claim limitations. If an Examiner fails to establish a prima facie case, a rejection is improper and will be overturned. See In re Rijckaert, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993). "If examination . . . does not produce a prima facie case of unpatentability, then without more, the Appellant is entitled to the grant of the patent." In re Oetiker, 977 F.2d 1443, 1445-1446, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

B. CITED PRIOR ART REFERENCES

1. TIEDEMANN

Tiedemann discloses a method for activating a mobile station for use within a communications network without the user having to bring the mobile station to a service center or a third party. Tiedemann also enables changing information in a mobile station for use within a communications network without the user having to bring the mobile station to the service center or the third party. Those two functions are referred to be Tiedemann as “over-the-air service programming (OTASP).” Thus, Tiedemann also discloses a signaling infrastructure to accomplish the over-the-air service programming of a mobile station for use within a communications network with minimal mobile switching center (MSC) and visitor location register (VLR) involvement.

More specifically, Tiedemann teaches that the mobile station transmits a message including an over-the-air service programming request, the Mobile Station Identification (MSID) stored in the mobile station and the mobile station's electronic serial number, to a mobile switching center coupled to the communications network. The electronic serial number is a 32-bit number assigned by the mobile station manufacturer, uniquely identifying the mobile station equipment. The MSID can be either the Mobile Identification Number (MIN) or the International Mobile Station Identity (IMSI). The MIN is a 34 bit number that is a digital representation of the 10 digit number assigned to a mobile station. The IMSI is a number up to 15 digits in length which uniquely identifies a mobile station internationally.

Tiedemann teaches that a Temporary Reference Number (TRN) identifying the mobile switching center and the mobile station is allocated for the mobile station at the mobile switching center. The TRN can be a MSID, a telephone directory number or any other number. If the TRN is not an MSID, a unique and temporary mobile identification (MSID) must also be allocated for use during the service programming procedure.

2. SAWYER

Sawyer teaches a method of managing Temporary Mobile Station Identity (TMSI) parameters in a radio telecommunications network having a first MSC, a second MSC, and a mobile station operating initially in a service area of the first MSC. A first Validity Area Parameter (VAP) is transmitted from the first MSC, assigning, by the first MSC, a first TMSI to the mobile station, and utilizing the first TMSI to identify the mobile station while the mobile station operates within the service area of the first MSC. The second MSC then transmits a second VAP. Subsequently, when the mobile station receives the second VAP,

the mobile station invalidates the first TMSI and the mobile station is registered in the second MSC using the mobile station's MIN. The second MSC then assigns a second TMSI to the mobile station which is used to identify the mobile station while the mobile station operates within the service area of the second MSC.

Alternatively, the TMSIs may be allocated by the Visitor Location Registers (VLRs) in the network. Thus, the network includes a first visitor location register (VLR-1) which is associated with a first mobile switching center (MSC-1) and a second mobile switching center (MSC-2). The network also includes a second visitor location register (VLR-2) which is associated with a third mobile switching center (MSC-3). A mobile station operates initially in a service area of MSC-1. Thus, the VLR-1 assigns a TMSI to the mobile station, and transmits a first VAP from the MSC-1 to the mobile station. The first VAP is transmitted from MSC-2 to the mobile station and a second VAP is transmitted from MSC-3 to the mobile station. Thus, the TMSI is used to identify the mobile station while the mobile station operates within the service area of the VLR-1, which corresponds to the first VAP. However, once the mobile station stops receiving the first VAP, the mobile station invalidates the TMSI and uses a permanent identification to identify the mobile station.

3. ONOE

Onoe teaches a location registration system for mobile communication wherein upstream traffic in a control channel is balanced with downstream traffic in a control channel to reduce traffic density for mobile station location updating in particular zones. More specifically a service area for mobile communication includes a plurality of location registration areas each having a plurality of zones, and each zone being related to a related base station. A fixed home memory station stores the location code of each mobile station showing which location registration area each mobile station is currently registered in.

4. MONRAD

Monrad teaches forming a mobile station identity (which can be used as an International Link Set-up Identity) that includes a previously used TLLI, an indication of an old Routing Area (RA) for a mobile station, an identification of the Public Land Mobile Network (PLMN) that is the owner of the previously used TLLI and the country where the PLMN belong.

5. HUTTUNEN

Huttunen teaches a technique for finding information, such as documents and/or files (giving information about matters and interests relating to a predetermined area where the user exist at the particular moment) available in a communications network. Thus, a mobile station (terminal) user is provided with easy access to documents and/or files including information of a certain area limited geographically by the mobile network the user is currently connected to. Accordingly, Huttunen teaches establishing a connection between the mobile user terminal and a mobile network operationally connected to a communications network and determining information about the location of the mobile user terminal using a mobile network apparatus. The location information determined by the mobile network apparatus is combined with a request to receive local information. Subsequently, the desired local information is transmitted to the mobile station. Thus, Huttunen also teaches an arrangement for locating a mobile user terminal in a communications network using a mobile network apparatus, i.e., a base station.

6. MADEMANN

Mademann teaches a location area management technique using a packet data service in the cellular mobile radiotelephone network. In Mademann, at least one virtual location area identifier that belongs to none of the real location areas in a mobile radiotelephone network is allocated to a packet data service network node that controls the packet data service; that packet data service network node is employed by its respective MSC for implementing location area management functions. The MSC treats the virtual location area identifier like any other location area identifier that is transmitted to and from the radio transmission system via an interface. However, both network equipment (the packet data service network node for the implementation of the packet data service and the MSC) can be supplied with location area information within the framework of a common location area management.

7. WALLENTIN

Wallentin discloses a radio access network portion of a telecommunications network which serves a mobile station when the mobile station is connecting to a core network. The

mobile station subscribes to a packet switched service and updates occur during the connection.

C. PRIOR ART REJECTIONS TRAVERSALS

Appellant traverses the prior art rejections because the cited prior art fails to disclose, teach or suggest all the features recited in the rejected claims. To establish anticipation or obviousness, the prior art must teach or suggest all the features recited in the rejected claims. However, the cited prior art fails to disclose, teach or suggest any mobile station temporary identity including at least part of an identifier indicating a network element which allocated the temporary identity, as recited in independent claims 7, 20, 25, 26, 28 and 31 and their respective dependent claims.

1. TIEDEMANN FAILS TO ANTICIPATE CLAIM 20

Tiedemann fails to disclose, teach or suggest the claimed cellular network comprising “at least one network element configured to allocate a temporary identity to at least one mobile station, wherein the temporary identity includes at least a part of an identifier indicating the network element that allocates the temporary identity; and a database element configured to: receive an inquiry including the at least part of the identifier of the network element that allocates the temporary identity and a paging area identifier; and determine, based on the inquiry, an address of the network element which allocated the temporary identity,” as recited in independent claim 20.

The January 12, 2006 Office Action asserted that the broadest reasonable interpretation of the claim language would cover, and thereby be anticipated by, the Temporary Reference Number (TRN) disclosed by Tiedemann. However, Tiedemann, analyzed individually or in combination, with the other cited prior art references, fails to teach or suggest the claimed invention which utilizes a temporary identity that includes at least part of an identifier indicating the network element that allocated the temporary identity.

Appellant notes for the record that the January 12, 2006 Office Action also incorrectly referred to the claim language, e.g., claim 20 actually recites at least one network element configured to allocate a temporary identity to at least one mobile station, wherein the temporary identity includes at least a part of an identifier indicating the network element that allocates the temporary identity. Similarly, claim 7 recites using a network element having an identifier of its

own to allocate a temporary identity to the at least one mobile station, wherein the temporary identity includes at least part of an identifier indicating the network element.

Nevertheless, the Office Action misquoted the claim language and stated: “[a]ccording to Tiedemann in column 2 lines 29-46, it is clearly stated that the TRN is allocated identifying the said MSC and the MS of which it is being allocated.” (emphasis added) However, the claimed subject matter requires that the temporary identity include at least part of an identifier indicating the network element. Thus, a difference between the claimed invention and the disclosure of Tiedemann is the fact that the claimed temporary identity not only identifies the network element that allocated the temporary identity but also includes at least a part of an identifier indicating the network element that allocated the temporary identity.

To the contrary, in Tiedemann, (see col. 2, lines 29-46), the TRN merely identifies the MSC that allocated the TRN and the mobile station to which the TRN is being allocated. Thus, that TRN is a unique number associated with a particular mobile station (see, column 2 lines 30-32). Accordingly, Tiedemann teaches using the TRN in a duality methodology wherein the TRN identifies both the mobile station and its associated MSC.

Thus, Tiedemann teaches that the TRN identifies the MSC and the mobile station to which it is being allocated (column 2 lines 30-32). Note the difference between “includes the identifier of” in the rejected claims and “identifies” as taught by Tiedemann. Although, Tiedemann teaches that the TRN can be “any number” (col. 2, line 34), Tiedemann also teaches that the TRN is a unique number. As a result, one of ordinary skill in the art would have recognized that the TRN need not necessarily include at least part of an identifier indicating the network element used to allocate a temporary identity to a mobile station.

As a further example provided by Tiedemann, the TRN can also be a Mobile Station Identification (MSID). Because a cellular network comprises a large number of network elements allocating temporary identities, it is impossible that each MSID includes at least part of an identifier indicating each network element used to allocate a temporary identity to mobile stations.

Accordingly, the only way that Tiedemann’s “any number” (col. 2 line 34) or MSID could have “identified” the MSC that allocated the TRN would have been via some look-up table, which is not disclosed by Tiedemann. Moreover, Appellant submits that such an implementation is a more awkward implementation than the claimed invention in which the temporary identity includes at least a part of an identifier indicating the network element that allocates the temporary identity.

2. TIEDEMANN FAILS TO ANTICIPATE CLAIM 22

Appellant submits that claim 22, which depends from claim 20, is patentable by virtue of its dependency on claim 20 and the traversal presented above.

3. TIEDEMANN FAILS TO ANTICIPATE CLAIM 25

Claim 25 is patentable over Tiedemann because Tiedemann fails to disclose, teach or suggest the claimed mobile station for a cellular network, “wherein the mobile station is configured to use a temporary identity allocated by a network element, the temporary identity including at least a part of an identifier of a network element that allocates the temporary identity, and wherein the mobile station is configured to use a part of the identifier of the network element that allocates the temporary identity for data transfer, and to use the temporary identity for signaling,” as recited in independent claim 25.

4. TIEDEMANN FAILS TO ANTICIPATE CLAIM 26

Claim 26 is patentable over Tiedemann because Tiedemann fails to disclose, teach or suggest the claimed mobile station for a cellular network, wherein the mobile station is configured to use a temporary identity allocated by a network element, the temporary identity including at least a part of an identifier of a network element that allocates the temporary identity, and wherein the temporary identity includes 3 to 5 bits of the identifier of the network element that allocates the temporary identity,” as recited in independent claim 26.

Tiedemann merely teaches that the TRN identifies the MSC and the mobile station to which it is being allocated (column 2 lines 30-32). However, as explained above, there is a difference between “includes the identifier of” in the rejected claims and “identifies” as taught by Tiedemann. Although, Tiedemann teaches that the TRN can be “any number” (col. 2, line 34), Tiedemann fails to teach or suggest that the TRN should include 3 to 5 bits of the identifier of the network element that allocates the temporary identity.

5. TIEDEMANN FAILS TO ANTICIPATE CLAIM 28

Similarly, claim 28 is patentable over Tiedemann because Tiedemann fails to disclose, teach or suggest the claimed network element for a cellular network configured to “allocate a temporary identity to at least one mobile station, wherein the temporary identity includes at least a part of an identifier indicating the network element that allocates the

temporary identity, and wherein the temporary identity includes 3 to 5 bits of the identifier of the network element,” as recited in independent claim 28.

6. TIEDEMANN IN COMBINATION WITH SAWYER, ONOE AND MONRAD FAILS TO RENDER CLAIMS 3 AND 7 OBVIOUS

As explained above, Tiedemann analyzed individually or in combination with Sawyer, Onoe and Monrad, fails to disclose, teach or suggest the claimed method comprising “using a network element having an identifier of its own to allocate a temporary identity to the at least one mobile station, wherein the temporary identity includes at least part of an identifier indicating the network element, wherein each of the at least one mobile stations is located within one of a plurality of paging areas of the cellular network, and wherein the temporary identity of the at least one mobile station also includes a paging identity which is unique to each of the at least one mobile stations, . . . wherein only the paging identity is used for paging the mobile station, and the method further comprises using the temporary identity for signaling,” as recited in independent claim 7.

Sawyer fails to remedy the deficiencies of Tiedemann because Sawyer merely teaches managing Temporary Mobile Station Identity (TMSI) parameters, wherein, when a mobile station receives a second VAP, the mobile station invalidates a first TMSI assigned using a first VAP, and registers in a second MSC using the mobile station's MIN.

Onoe fails to remedy the deficiencies of Tiedemann and Sawyer because Onoe merely teaches a fixed home memory station stores the location code of each mobile station showing which location registration area each mobile station is currently registered in.

Monrad fails to remedy the deficiencies of Tiedemann, Sawyer and Onoe because Monrad merely teaches forming a mobile station identity (which can be used as an International Link Set-up Identity) that includes a previously used TLLI, an indication of an old Routing Area (RA) for a mobile station, an identification of the Public Land Mobile Network (PLMN) that is the owner of the previously used TLLI and the country where the PLMN belong..

Further, Appellant submits that claim 3, which depends from claim 7, is patentable by virtue of its dependency on claim 7 and the traversal presented above.

Therefore, the combined teachings of the Tiedemann, Sawyer, Onoe and Monrad fail to disclose, teach or suggest all the features recited in dependent claim 27.

7. TIEDEMANN IN COMBINATION WITH HUTTUNEN

FAILS TO RENDER CLAIM 21 OBVIOUS

As explained above, Tiedemann fails to disclose, teach or suggest the claimed cellular network comprising “at least one network element configured to allocate a temporary identity to at least one mobile station, wherein the temporary identity includes at least a part of an identifier indicating the network element that allocates the temporary identity; and a database element configured to: receive an inquiry including the at least part of the identifier of the network element that allocates the temporary identity and a paging area identifier; and determine, based on the inquiry, an address of the network element which allocated the temporary identity,” as recited in claim 21 by virtue of its dependency on independent claim 20.

Huttunen fails to remedy the deficiencies of Tiedemann because Huttunen merely teaches a technique for finding information, such as documents and/or files (giving information about matters and interests relating to a predetermined area where the user exist at the particular moment) available in a communications network.

Therefore, the combined teachings of the Tiedemann and Mademann fail to disclose, teach or suggest all the features recited in dependent claim 27.

8. TIEDEMANN IN COMBINATION WITH MADEMANN FAILS TO RENDER CLAIMS 27 OBVIOUS

As explained above, Tiedemann fails to disclose, teach or suggest the claimed network element for a cellular network configured to “allocate a temporary identity to at least one mobile station, wherein the temporary identity includes at least a part of an identifier indicating the network element that allocates the temporary identity, and wherein the temporary identity includes 3 to 5 bits of the identifier of the network element,” as recited in claim 27 by its dependency on independent claim 28.

Tiedemann merely teaches that the TRN identifies the MSC and the mobile station to which it is being allocated (column 2 lines 30-32). However, as explained above, there is a difference between “includes the identifier of” in the rejected claims and “identifies” as taught by Tiedemann. Although, Tiedemann teaches that the TRN can be “any number” (col. 2, line 34), Tiedemann fails to teach or suggest that the TRN should include 3 to 5 bits of the identifier of the network element that allocates the temporary identity.

Mademann fails to remedy the deficiencies of Tiedemann because Mademann merely teaches that at least one virtual location area identifier that belongs to none of the real location areas in a mobile radiotelephone network is allocated to a packet data service

network node that controls the packet data service; that packet data service network node is employed by its respective MSC for implementing location area management functions..

Therefore, the combined teachings of the Tiedemann and Mademann fail to disclose, teach or suggest all the features recited in dependent claim 27.

9. TIEDEMANN IN COMBINATION WITH WALLENTIN
FAILS TO RENDER CLAIMS 29-31 OBVIOUS

Tiedemann fails to disclose, teach or suggest the claimed radio station controller that routes data packets including a temporary identity allocated to a mobile station “wherein the temporary identity includes at least part of an identifier indicating a network element which allocated the temporary identity; and wherein . . . the radio station controller is configured to use at least part of the temporary identifier to route data packets to the network element when the network element is serving the mobile station, and wherein the temporary identity comprises 3 to 5 bits of the identifier of the network element,” as recited in independent claim 31 and its dependent claims 29 ad 30.

As explained above, there is a difference between “includes the identifier of” in the rejected claims and “identifies” as taught by Tiedemann. Furthermore, although, Tiedemann teaches that the TRN can be “any number” (col. 2, line 34), Tiedemann fails to teach or suggest that the TRN should include 3 to 5 bits of the identifier of the network element that allocates the temporary identity.

Wallentin fails to remedy the deficiencies of Tiedemann because Wallentin merely discloses a radio access network portion of a telecommunications network which serves a mobile station when the mobile station is connecting to a core network. The mobile station subscribes to a packet switched service and updates occur during the connection. .

Therefore, the combined teachings of the Tiedemann and Wallentin fail to disclose, teach or suggest all the features recited in independent claim 31 and its dependent claims 29 and 30.

V. CONCLUSION

For at least the reasons discussed above, it is respectfully submitted that claims 3, 7, 20-22 and 25-31 are patentable over the cited prior art analyzed individually or in combination. Appellant respectfully requests this Honorable Board to reverse the rejection of these claims and direct that the claims be passed to issue.

Respectfully submitted,

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Attachments:

Claims Appendix
Evidence Appendix
Related Proceedings Appendix

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VI. 37 C.F.R. § 41.37(c)(viii) – CLAIMS APPENDIX

1.-2. (Cancelled)

3. (Previously Presented) The method of claim 7, further comprising uniquely identifying the network element based on the identifier of the network element and an identifier of the paging area where the temporary identity was allocated.

4.-6. (Cancelled)

7. (Previously Presented) A method of allocating a temporary identity to at least one mobile station in a cellular network, the method comprising:

using a network element having an identifier of its own to allocate a temporary identity to the at least one mobile station, wherein the temporary identity includes at least part of an identifier indicating the network element, wherein each of the at least one mobile stations is located within one of a plurality of paging areas of the cellular network, and wherein the temporary identity of the at least one mobile station also includes a paging identity which is unique to each of the at least one mobile stations, and wherein each of the plurality of paging areas includes an associated master network element for allocating a paging identity to each of the at least one mobile stations in the paging area;

requesting a paging identity for at least one mobile station from the master network element of a paging area; and

allocating the temporary identity to the at least one mobile station in the paging area associated with the master network element,

wherein each of the plurality of paging areas is coupled to a plurality of network elements;

the method further comprising:

using the temporary identity for routing uplink traffic to the network element currently serving the at least one mobile station;

after the at least one mobile station moves from a first paging area of the plurality of paging areas to a second paging area of the plurality of paging areas, the network element of the second paging area using the temporary identity and the identifier of the second paging

area for deriving an identifier of the network element of the first paging area which served the mobile station before the move, and

wherein only the paging identity is used for paging the mobile station, and the method further comprises using the temporary identity for signaling.

8.-19. (Cancelled)

20. (Previously Presented) A cellular network comprising:

at least one network element configured to allocate a temporary identity to at least one mobile station, wherein the temporary identity includes at least a part of an identifier indicating the network element that allocates the temporary identity; and

a database element configured to:

receive an inquiry including the at least part of the identifier of the network element that allocates the temporary identity and a paging area identifier; and

determine, based on the inquiry, an address of the network element which allocated the temporary identity.

21. (Previously Presented) The cellular network of claim 20, wherein the database element is a domain name server.

22. (Previously Presented) The cellular network of claim 20, wherein the database element is further configured to send an inquiry to another network element currently storing a context for the mobile station in question.

23.-24. (Cancelled)

25. (Previously Presented) A mobile station for a cellular network, wherein the mobile station is configured to use a temporary identity allocated by a network element, the temporary identity including at least a part of an identifier of a network element that allocates the temporary identity, and wherein the mobile station is configured to use a part of the identifier of the network element that allocates the temporary identity for data transfer, and to use the identity for signaling.

26. (Previously Presented) A mobile station for a cellular network, wherein the mobile station is configured to use a temporary identity allocated by a network element, the temporary identity including at least a part of an identifier of a network element that allocates the temporary identity, and wherein the temporary identity includes 3 to 5 bits of the identifier of the network element that allocates the temporary identity.

27. (Previously Presented) The network element of claim 28, wherein the network element is a support node.

28. (Previously Presented) A network element for a cellular network configured to allocate a temporary identity to at least one mobile station, wherein the temporary identity includes at least a part of an identifier indicating the network element, and wherein the temporary identity includes 3 to 5 bits of the identifier of the network element.

29. (Previously Presented) The radio station controller of claim 31, wherein the radio station controller is a base station controller.

30. (Previously Presented) The radio station controller of claim 31, wherein the radio station controller is a radio network controller.

31. (Previously Presented) A radio station controller for a cellular network, configured to route data packets including a temporary identity allocated to a mobile station, wherein the temporary identity includes at least part of an identifier indicating a network element which allocated the temporary identity;

and wherein the radio station controller is configured to use at least part of the temporary identifier to route data packets to the network element when the network element is serving the mobile station, and wherein the temporary identity comprises 3 to 5 bits of the identifier of the network element.

VII. EVIDENCE APPENDIX

None

VIII. RELATED PROCEEDINGS APPENDIX - 37 C.F.R. § 41.37(c)(1)(x)

None